

Precisely Controlled Flying Electric Generators

Abstract of Disclosure

Tethered wind supported flying electric generators (FEGs) capable of deriving power from high altitude winds are held stable in precisely controlled positions in spite of wind fluctuations and temporary wind absence. FEGs are windmill-like rotorcraft, somewhat resembling helicopters, which are raised to a strong wind altitude using electric motors driving the rotors, each craft powered through tether(s) from a corresponding single point on the ground. Then the rotorcraft is tilted at an angle, the wind turns the rotors, and thus keeps the craft aloft and sends power back to the ground, now using the motors as generators. Precise craft geographic position, altitude and attitude are determined by various sensing means. Computer logic, provided with this information and wind and other weather data, command individual craft control functions and thus may also command arrays of these FEGs to maintain precise geographic and altitude locations or be grounded under tether winch control when necessary.

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